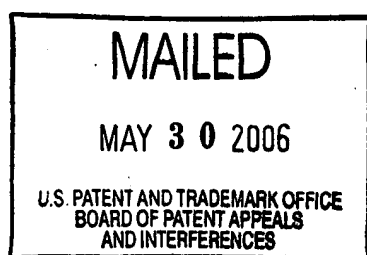


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES



Ex parte Gebhard Dopper

Appeal No. 2006-0559
Application No. 10/085,527

ON BRIEF

Before CAROFF, HANLON, and DELMENDO, Administrative Patent Judges.
CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-10, 12-13, and 18-25, all of the pending claims remaining in appellant's involved application.

The claims on appeal are directed to a method for the surface preparation of a metal component having a curved surface prior to the application of a ceramic coating to the surface.

Appellant essentially argues the patentability of the appealed claims as a group, rather than individually. Accordingly, the claims are considered as standing or falling

together for purposes of this appeal. Therefore, we shall limit our consideration to claim 1, the first of two independent claims, which reads as follows:

1. A method for the surface preparation of a metal component having a curved surface to accept a ceramic coating comprising:

measuring a contour line geometry of the curved surface;

inputting the measured geometry into a control system; and

controlling a plurality of spray parameters of the ceramic coating via the control system based on the geometry to direct a particle source toward the metal component, the spray parameters comprising: a blasting distance, a blasting intensity, a blasting angle and a blasting time such that at least one of the parameters remain constant during the surface preparation.

The prior art references relied upon by the examiner are:

Taylor et al. (Taylor)	5,520,516	May 28, 1996
McComas et al. (McComas)	Re 35,611	Sept. 23, 1997
Kaiba et al. (Kaiba)	6,096,132	Aug. 1, 2000

The following rejections are before us for review:

1. Claims 1-10 and 12-13 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

2. Claims 1-10, 12-13, and 18-25 stand rejected under 35 U.S.C. § 103(a) for obviousness in view of Taylor alone, or in view of Taylor taken in combination with McComas and Kaiba.

With regard to the 35 U.S.C. § 112 rejection, the examiner points out, and we agree, that there is no descriptive support in appellant's specification for controlling spray parameters "of the ceramic coating" as recited in claim 1. Rather, the specification only

focuses upon controlling the spray parameters of a particle jet used to abrade and roughen a substrate prior to coating.

In response to the rejection, appellant merely refers to an amendment after final which was submitted in an attempt to overcome the rejection. However, that amendment was not entered by the examiner and, thus, is not before us. Accordingly, the 35 U.S.C. § 112 rejection is summarily affirmed.

In considering the 35 U.S.C. § 103 rejections, we shall follow the convention adopted by the examiner in interpreting the “spray parameters” recited in claim 1 as referring to a spray jet emanating from the recited “particle source”, rather than being associated with a subsequently applied ceramic coating.

With regard to the 35 U.S.C. § 103 rejections, we have carefully considered the evidentiary record in light of the positions taken by the examiner and the appellant. Having done so, we conclude that the examiner has established a prima facie case of obviousness with respect to the subject matter on appeal, which the appellant has not adequately rebutted. Accordingly, we shall affirm each of the alternative rejections under 35 U.S.C. § 103.

First, we note that the claims have been rejected based upon Taylor alone. Taylor (col. 3, line 60 - col. 4, line 14) discloses a method for roughening the tip of a gas turbine blade prior to application of a zirconium oxide coating by abrasive grit blasting or, alternatively, by using a high pressure pure waterjet. Taylor further indicates that jet

pressure and nozzle traverse rate must be “carefully controlled” to avoid “too deep erosion”.

In rejecting the claims over Taylor alone, the examiner has made a number of significant observations which we find as being based upon reasonable and logical presumptions about the knowledge and skill possessed by an engineer having ordinary skill in the art. First, the examiner notes in her answer that the tip of a turbine blade has a curved surface; of which the ordinary practitioner would have been well aware since it is not a particularly subtle characteristic. Second, the examiner reasonably imputes knowledge of basic spray jet parameters, such as blasting distance, intensity, angle and time to the person of ordinary skill in the art; and logically suggests that such a person would have recognized that such parameters would directly affect the amount and degree of roughness produced at any point on a substrate surface. Third, the examiner indicates that the engineer of ordinary skill would have recognized that it would be desirable to achieve uniform roughness over the entire substrate surface in order to promote uniform adherence of a subsequently applied coating over the entire surface. Fourth, since a turbine blade tip is known to have a curved surface, one of ordinary skill would have recognized that one way to achieve uniform roughening would be to require following the contour line geometry of the curved surface. That is, one of ordinary skill in the art would have recognized that uniform blasting may be achieved by maintaining a constant blasting distance while also holding constant other critical parameters. In this regard, one of

ordinary skill in the art would have been led to hold such parameters constant to the greatest extent to achieve uniform blasting. Thus, it would have been prima facie obvious within the context of 35 U.S.C. § 103 to maintain at least one basic spray parameter constant along the contour line to achieve uniform roughness over the entire substrate surface.

And, fifth, the examiner notes that an engineer of ordinary skill would have appreciated that a process involving multiple parameters can be more efficiently controlled by using an automatic control system, citing In re Venner, 262 F2d 91, 95, 120 USPQ 192, 194-5 (CCPA 1958). Also, see Dann v. Johnston, 425 U.S. 219, 96 S.Ct. 1393, 189 USPQ 257, 261 (1976).

Significantly, the appellant does not specifically refute any of the examiner's findings noted above as regards the rejection based upon Taylor alone. We regard each of those findings as reasonable and logical presumptions regarding the knowledge and skill possessed by an ordinary practitioner in the art. Certainly, a person of ordinary skill in the art is presumed to know something about the art apart from what the references specifically disclose, and to possess a level of skill commensurate with that knowledge. In re Sovish, 769 F.2d 738, 742, 226 USPQ 771, 773-74 (Fed. Cir. 1985); In re Bozek, 416 F2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969).

Since the appellant has not specifically refuted any of the examiner's findings noted above, we hold that the examiner has established a prima facie case of obviousness in view of Taylor alone.

In the alternative, the examiner has rejected all of the appealed claims under 35 U.S.C. § 103 in view of Taylor combined with McComas and Kaiba. McComas apparently is cited as further evidence of the need to control certain spray parameters when removing material from a surface with a spray jet. Kaiba apparently is cited for its teaching of the use of an automatic control system in applying a spray jet to a curved surface.

Although McComas relates to the removal of a coating from a surface rather than roughening an uncoated surface, and Kaiba relates to a painting process instead of an abrasive grit blasting process, as secondary references, we agree with the examiner that they may be properly relied upon as further evidence of basic principles and techniques applied when directing a spray jet at a curved surface. Accordingly, we find that the combination of references relied upon by the examiner reinforces, and provides further evidence to support, a prima facie case of obviousness based upon Taylor alone.

For all of the foregoing reasons, the decision of the examiner is affirmed.

AFFIRMED

) BOARD OF PATENT
) APPEALS
) AND
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